BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK :Package-1, includes 3 works of Rs.200.00 lakhs 1) Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06 Byatarayanapura Sub Division. 2) Improvements to Roads and Drains at Manjunathnagara in Ward No. 06 Byatarayanapura Sub Division. 3) Improvements of Drains and RCC Culverts at Hegadenagar 9th Cross to 13th Cross in Ward no 06 Byatarayanapura Sub Division.

Agency: Sri. M. Venkatesh Chikkanahalli Vijayapura Bangalore Rural 562135

MEASUREMENT SHEET - 2ND and FINAL BILL

ABSTRACT ESTIMATE

Sl. No.	Description of Work	Unit	Quantity Executed	Rate	Amount	Remark
1	**Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. and as per the directions of the Engineer-in-charge of the work .**					
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		306.23			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**306.23**			
	Previous Bill Qty		**1752.09**			
	Total		**2058.32**			
	BOQ qty		**2060.33**			
	Now to be paid Quantity	**Cum**	**306.23**	**191.43**	**58620.65**	
2	**Providing granite slabs of selected quality roughly dressed having a size of 7.5cms thick and fixed in cement mortar (1:2) includling fixing curing etc and as per specifications and as per the direction of Engineer in charge of the work.**					
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		843.21			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**843.21**			
	Previous Bill Qty		**350.73**			
	Total		**1193.94**			
	BOQ qty		**1008.45**			
	Now to be paid Quantity	**Sqm**	**843.21**	**745.56**	**628663.65**	

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Contractor PMC AssistantEngineer Assistant Executive Engineer

	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. and as per the direction of Engineer in charge of the work.					
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		83.47			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**83.47**			
	Previous Bill Qty		**285.90**			
	Total		**369.36**			
	BOQ qty		**369.62**			
	Now to be paid Quantity	**Cum**	**83.47**	**5990.60**	**500011.42**	
5	**Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. and as per the direction of Engineer in charge of the work.**	**Cum**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		94.11			

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Contractor PMC AssistantEngineer Assistant Executive Engineer

3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**94.11**			
	Previous Bill Qty		**351.12**			
	Total		**445.23**			
	BOQ qty		**446.45**			
	Now to be paid Quantity	**Cum**	**94.11**	**6170.00**	**580649.45**	
6	**Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift. and as per the direction of Engineer in charge of the work.**	**Sqm**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		627.39			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**627.39**			
	Previous Bill Qty		**2835.99**			
	Total		**3463.38**			
	BOQ qty		**2976.30**			
	Now to be paid Quantity	**Sqm**	**627.39**	**106.85**	**67036.62**	
13	**Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification**	**Cum**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		529.02			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**529.02**			
	Previous Bill Qty		**-**			
	Total		**529.02**			
	BOQ qty		**423.50**			
	Now to be paid Quantity	**Cum**	**529.02**	**358.50**	**189653.67**	

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Contractor PMC AssistantEngineer Assistant Executive Engineer

	Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. and as per the directions of the Engineer-in-charge of the work .	**Cum**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06					
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		108.09			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**108.09**			
	Previous Bill Qty		**1592.10**			
	Total		**1700.19**			
	BOQ qty		**1616.11**			
	Now to be paid Quantity	**Cum**	**108.09**	**148.69**	**16071.68**	
7	**Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. and as per the directions of the Engineer-in-charge of the work .**	**Cum**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06					
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		718.31			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**718.31**			
	Previous Bill Qty		**1283.30**			
	Total		**2001.61**			
	BOQ qty		**1662.93**			
	Now to be paid Quantity	**Cum**	**718.31**	**1980.25**	**1422434.76**	
9	**Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. and as per the directions of the Engineer-in-charge of the work**	**Sqm**				

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Contractor PMC AssistantEngineer Assistant Executive Engineer

	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		1222.50			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**1222.50**			
	Previous Bill Qty		**20722.03**			
	Total		**21944.53**			
	BOQ qty		**23771.00**			
	Now to be paid Quantity	**Sqm**	**1222.50**	**3.56**	**4352.10**	
10	**Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications and as per the direction of Engineer in charge of the work.**	**Sqm**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		3875.64			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**3875.64**			
	Previous Bill Qty		**21941.28**			
	Total		**25816.92**			
	BOQ qty		**27873.50**			
	Now to be paid Quantity	**Sqm**	**3875.64**	**13.06**	**50615.86**	
11	**Providing and laying bituminous concrete 40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 6% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification and as per the directions of the Engineer-in-charge of the work .**	**Cum**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		155.03			

Contractor

RUDRAPRASAD CONSULTANTS BANGALORE PMC

AssistantEngineer

Assistant Executive Engineer

3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**155.03**			
	Previous Bill Qty		**879.69**			
	Total		**1034.72**			
	BOQ qty		**1114.94**			
	Now to be paid Quantity	**Cum**	**155.03**	**7934.05**	**1229980.86**	
12	**Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. and as per the directions of the Engineer-in-charge of the work .**	**Sqm**				
	Sub name of work					
	Present Bill Quantity					
1	Improvements to Road and Drain at Sadiq Layout (Defence Layout) in Ward No. 06		-			
2	Improvements to Roads and Drains at Manjunathnagara in Ward No. 06		125.76			
3	Improvements to Drains and RCC Culverts at Hegadenagar 9th cross to 13th cross in Ward no 06		-			
	present Qty		**125.76**			
	Previous Bill Qty		**739.90**			
	Total		**865.66**			
	BOQ qty		**882.20**			
	Now to be paid Quantity	**Sqm**	**125.76**	**607.85**	**76443.22**	
				TOTAL AMOUNT	**4824533.93**	

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RUDRAPRASAD CONSULTANTS BANGALORE

Contractor PMC AssistantEngineer Assistant Executive Engineer